

- 49 -

CLAIMS

1. A display apparatus, comprising display elements including a medium injected and sealed between a pair of substrates at 5 least one of which is transparent,

the medium changing in magnitude of optical anisotropy upon application of voltage,

each of the display elements containing colors required to produce a color image display, so as to produce a color 10 image display,

different voltages being applied to the display elements so as to display the colors required to produce a color image display with an identical gradation.

15 2. The display apparatus as set forth in claim 1, wherein the voltages applied are determined based on a lookup table which associates gradations of an image displayed by the display apparatus with the voltages applied to the display elements.

20 3. The display apparatus as set forth in claim 1, wherein the colors required to produce a color image display are three colors of RGB.

25 4. The display apparatus as set forth in claim 1, wherein the

- 50 -

medium exhibits optical isotropy in absence of an electric field and exhibits optical anisotropy under applied voltage.

5. The display apparatus as set forth in claim 1, wherein the medium exhibits optical anisotropy in absence of an electric field and exhibits optical isotropy under applied voltage.

10. The display apparatus as set forth in claim 1, wherein the medium is comprised by molecules having an ordered structure less than optical wavelengths either under applied voltage or in absence of applied voltage.

15. The display apparatus as set forth in claim 1, wherein the medium has an ordered structure showing cubic symmetry.

8. The display apparatus as set forth in claim 1, wherein the medium is comprised by molecules showing a cubic phase or a smectic D phase.

20. The display apparatus as set forth in claim 1, wherein the medium is comprised by a liquid crystal microemulsion.

25. The display apparatus as set forth in claim 1, wherein the medium is comprised by a lyotropic liquid crystal showing any one of a micelle phase, a reverse micelle phase, a sponge

- 51 -

phase, and a cubic phase.

11. The display apparatus as set forth in claim 1, wherein the medium is comprised by a liquid crystal fine particle dispersion system showing any one of a micelle phase, a reverse micelle phase, a sponge phase, and a cubic phase.

5 12. The display apparatus as set forth in claim 1, wherein the medium is comprised by a dendrimer.

10

13. The display apparatus as set forth in claim 1, wherein the medium is comprised by molecules showing a cholesteric blue phase.

15 14. The display apparatus as set forth in claim 1, wherein the medium is comprised by molecules showing a smectic blue phase.

20 15. A display element in a display apparatus, each display element containing colors required to produce a color image display, so as to produce a color image display,

25 different voltages being applied to the display elements so as to display the colors required to produce a color image display with an identical gradation,

- 52 -

a medium being injected and sealed between a pair of substrates at least one of which is transparent, the medium changing in magnitude of optical anisotropy upon application of voltage.